ENHANCING BUSINESS OPERATIONS THROUGH MICROLEARNING, BPM AND RPA

Ruxandra BEJINARU

Marian-Vladut TOMA

Academy of Romanian Scientists, Ilfov 3, 050044 Bucharest, Romania
"Stefan cel Mare" University of Suceava, Suceava, Romania

CONTENT

1. Introduction and problem statement

2. Literature Review: BPM, RPA,

3. Methodology

4. Cluster analysis

5. Conclusions

1. Introduction and problem statement

- A forward-looking business company should adopt a number of long-term strategic development directions to maintain its leading position in the field and to fulfil its mission of creating satisfaction opportunities for clients and the community.

- **The scope** of the paper is to offer a forward-looking perspective on employee training and organizational efficiency in the business context of integrating modern technology in professional development.

- **The aim** is to identify what impact might have enhancing business operations using BPM (Business Process Modeling) and RPA (Robotic Process Automation).

Definition

- BPM allows for the systematic analysis and optimization of the learning process itself, ensuring that the educational content is not only relevant but also delivered in the most efficient manner possible.

- BPM is a methodology that facilitates the visual representation of an organization's processes, aiding in their comprehension, analysis, and. improvement

Evolution

- The application of Business Process Modeling in various domains showcases its versatility and transformative potential.

- Recently, the educational sector has emerged as a significant area where BPM principles are being applied to enhance operational efficiency, improve student services, and streamline administrative processes.

Definition

- Robotic Process Automation (RPA) represents a significant advancement in how businesses approach task automation, focusing on streamlining repetitive, rule-based operations traditionally performed by human workers.

- At its core, RPA utilizes software bots to carry out a myriad of tasks across different digital platforms and applications, mimicking human actions such as clicking, typing, and navigating through interfaces with remarkable precision and speed.

Evolution

- The operational backbone of RPA is formed by software bots, which are specifically programmed to execute predefined tasks (Anagnoste et al., 2021).

- These bots are adept at handling a variety of operations, from simple data entry to complex business analytics, operating around the clock without the fatigue or errors associated with human labor.

Definition

Microlearning is characterized by its delivery of content in small, manageable units, facilitating short-term focused learning activities.

It leverages relatively brief learning units to support skill acquisition, knowledge retention, and the achievement of specific learning objectives, making it particularly suited for ongoing professional development.

Microlearning's effectiveness in catering to the diminishing attention spans of modern learners, enhancing engagement through bite-sized content that can be easily assimilated into daily routines.

Evolution

• Within the domain of business education, microlearning has proven to be an invaluable tool for imparting essential business skills and knowledge.

• *Jahnke et al, 2020* -highlight microlearning's role in facilitating just-in-time learning, where learners can immediately apply concepts and skills to real-world business challenges, thereby reinforcing learning through practice.

• The combination of microlearning with BPM and RPA technologies enables the creation of dynamic, adaptive learning environments that can personalize content delivery based on individual learner performance and feedback.

Aim of research

- TO derive insights from the existing body of knowledge in the complex fields of "microlearning", "BPM" and "RPA".

- TO achieve this goal, we have conducted a bibliometric analysis, a methodology that utilizes quantitative approaches to examine and assess academic literature.

- THE primary role of bibliometric analysis is to uncover research patterns and trends, such as academic productivity, the significance of contributions, and the interconnections among various academic disciplines.
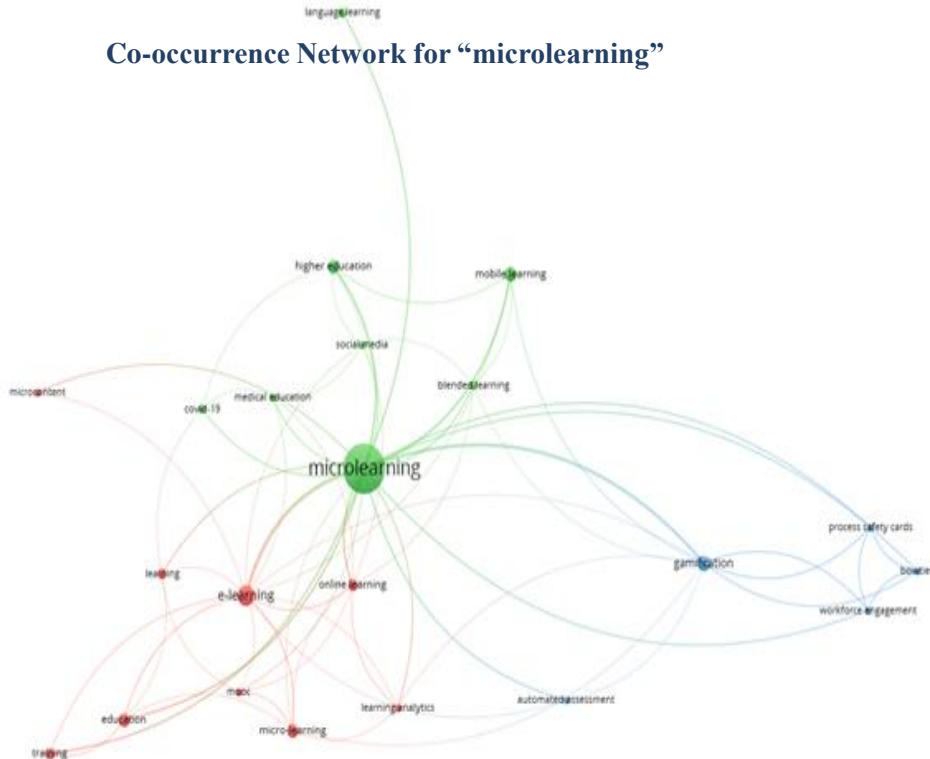
Research methods

- Literature analysis reveals lack of development of BPM, RPA and microlearning applications that can be tested and used in business, both for employees and managers.

- We developed a **bibliometric analysis** of the 3 concepts evolution in business.

Co-occurrence Network for "microlearning"

-"mobile learning," "e-learning," and "blended learning" are strongly linked, indicating a significant relationship between microlearning and these modern educational methodologies.

-these show the trend of utilizing technology to facilitate learning in manageable increments, often through mobile and online platforms which allow for flexible and accessible education.

-"higher education" and "medical education" suggests that this approach is being researched and potentially applied in these formal education settings, possibly as a means to enhance the traditional learning experience or to provide additional support and resources.

-"social media" and "gamification" in the vicinity of "microlearning" implies an intersection with more interactive and engagement-focused methods of learning. This could indicate a research interest in how game-like elements and social platforms can be incorporated into microlearning to increase motivation and participation.

Co-occurrence Network for "Business Process Modeling"

In Figure 2, the central and most prominent cluster is anchored by the term "business process modeling," suggesting it is a primary focus of the research field and frequently associated with other key terms.

Terms such as (BPM), "process mining," and "simulation" are prominently connected to the central term, indicating that these are well-established and significant sub-areas in the domain of business process modeling.

The strong connections between "business process modeling" and "process mining" might indicate a trend in the literature that emphasizes the importance of extracting process-related information from event logs to improve business processes.

Co-occurrence Network for "Robot Process Automation"

IoT, blockchain
digital twins
Industry 5.0

blockchain
technology

RPA's role in Industry 5.0 underscores its capacity to support personalized production and foster human-robot collaboration, aligning automated processes with human ingenuity and customization demands.

Case Studies

- JPMorgan Chase & Co. utilized RPA within its BPM framework to automate routine tasks, thereby enhancing efficiency and allowing employees to focus on more strategic activities.

- Similarly, AT&T's adoption of microlearning to support continuous employee development in the face of industry changes demonstrates the approach's effectiveness in enhancing job performance and engagement. The company, however, struggled with content curation and technological integration, emphasizing the need for focused content development strategies and technological compatibility.

- Siemens AG, a global powerhouse in electronics and electrical engineering, has pioneered the use of BPM and RPA to enhance its operational efficiency and agility. The company initiated a comprehensive digital transformation program aimed at automating complex business processes across various departments, from procurement to human resources (Lacity & Willcocks, 2016).

- By integrating RPA with their BPM initiatives, Siemens was able to automate repetitive tasks, reducing manual effort and improving process speed. This transformation led to significant cost savings and increased process transparency. However, Siemens faced challenges in aligning its IT infrastructure with the new digital tools and in managing organizational change. The company learned the importance of investing in employee training and communication strategies to facilitate adaptation and buy-in across the organization.

Common Challenges

Future perspectives

- *Technological Compatibility and Integration*

- *Change Management and Employee Resistance*

- *Scalability and Maintenance*

- *Content Relevance and Engagement in Microlearning*

- *Enhancing Integration with AI and ML*

- *Blockchain for Security and Transparency*

- *IoT for Real-time Data Integration*

- *AR and VR in Microlearning*

- *Ethical and Social Implications*

- *Effectiveness of Microlearning Adoption in SMEs*

Conclusions

- "Robotic Process Automation" (RPA) revolutionizes task automation in business, offering a sophisticated blend of technologies like AI, ML, NLP, and OCR to automate complex, decision-requiring tasks beyond traditional rule-based operations, thus significantly enhancing operational efficiency, customer satisfaction, and personalizing the learning experience in education.

- "microlearning", enhanced by Business Process Management (BPM) and Robotic Process Automation (RPA), presents a revolutionary approach to business education, offering personalized, efficient, and just-in-time learning experiences that cater to the modern professional's needs, thereby transforming the landscape of corporate training and professional development.

THANK YOU for your attention

ENHANCING BUSINESS OPERATIONS THROUGH MICROLEARNING, BPM AND RPA

Ruxandra BEJINARU

Marian-Vladut TOMA

Academy of Romanian Scientists, Ilfov 3, 050044 Bucharest, Romania
"Stefan cel Mare" University of Suceava, Suceava, Romania